



## **RHEEEPing the Rewards of Energy Efficiency**

Through a new S.C. Energy Office program, 17 of South Carolina's colleges and universities have the opportunity to earn reward funds for projects that reduce energy costs. The Rewards for Higher Education Energy Efficiency Projects (RHEEEP) program extends the certification of energy cost savings done by the Energy Office for the Commission on Higher Education (CHE). Certification of these savings means that the CHE adjusts the funding formula for the 17 universities, four-year colleges, and regional campuses to allow them to retain energy savings in their budgets. Facility departments can use the RHEEEP funds for projects or programs that encourage energy efficiency.

Although the certification of energy cost savings program has existed since 1996, facility departments have not received direct rewards for their efforts to reduce energy costs for the institutions. A project certified in 1997 has reduced energy expenses by as much \$608,455 annually at the College of Charleston, meaning that avoiding energy costs allows the institution to spend that money in other programs. RHEEEP recognizes the facility departments that initiate these valuable projects and rewards them for their innovation and commitment to reducing energy costs.

RHEEEP materials were included in the certification of cost savings information distributed to institutions in November. After certification of cost savings, the Energy Office will use a formula to find the Percent Reduction in Costs, which will establish the financial impact of the project. The Energy Office has \$100,000 available for RHEEEP. Projects that reduce energy costs by 1 to 10 percent result in a reward of \$1,000, 10.1 to 15 percent result in a reward of \$2,000, 15.1 to 20 percent result in a reward of \$3,000, 20.1 to 25 percent result in a reward of \$4,000, and savings greater than 25 percent result in a reward of \$5,000. The reward funds can be used for purchase of computer hardware or software for energy accounting and management, training and manuals to improve energy management, testing or monitoring equipment, or energy efficiency projects.

The funds should be available by February 2001 and must be used by June 30, 2002. Information on both the CHE certification process and RHEEEP can be found at <http://www.state.sc.us/energy/energycostsavings.htm>. Contact Carmen Harper at (803) 737-7177 for questions about RHEEEP.

## **SCEO and the Radioactive Waste Disposal Program**

The passage of the Atlantic Interstate Low-Level Radioactive Waste Compact Implementation Act in June 2000 marked a significant change in how radioactive waste policy is coordinated in the state. The SC Budget and Control Board, owner of the land on which the Barnwell facility is located, has a plethora of new responsibilities under the legislation. The Board now sets radioactive waste disposal rates for in-region and non-regional waste and has the authority to negotiate special deals with waste generators; will act as the state's representative in allowable costs hearings for the site operator before the Public Service Commission; must continue to monitor the adequacy of the closure fund and extended care fund; and serves as a point of contact for all inquiries relating to radioactive waste disposal in the state.

Because the day-to-day volume of work associated with these new responsibilities exceeded existing staff resources, the Board created three positions and located the Radioactive Waste Disposal Program in the SC Energy Office. Bill Newberry ([bnewber@drd.state.sc.us](mailto:bnewber@drd.state.sc.us)), a former consulting technical specialist with the Idaho National Environmental and Engineering Lab, manages the program and serves as the Board's point of contact for all pricing issues. Tricia Tangney ([ptangney@drd.state.sc.us](mailto:ptangney@drd.state.sc.us)), a program coordinator who has worked with the Energy Office for four years,

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## Notes From the Director

*Mitch Perkins*



For the first time, scientists are saying there is no other explanation but global warming for record-high temperatures across the country, says a top US official. January, February, and March, 2000 temperatures in the United States were the warmest ever in the National Oceanic and Atmospheric Administration's (NOAA) 106 years of record keeping. And 30 states - from just west of the Rockies to New England - were much warmer than normal, with many areas still in the grip of a long drought. NOAA Director James Baker says, "The scientists are now telling us they can't explain what we have seen without including a significant part of global warming. They have never said that before. This is a very significant fact - it's a wake up call, really." Federal officials say we're already seeing the impact, a significant increase in severe weather damage over the past decade. There have been more floods and more droughts, and now scientists say get ready for hurricanes with more destructive power. Baker says, "Water is the engine of hurricanes so a warmer ocean leads to stronger winds, stronger hurricanes." And there is another threat for cities on or near the coast, particularly New Orleans, which is already below sea level. Global warming will raise sea levels as much as 5 feet over the next century. The director of the Federal Emergency Management Agency, James Lee Witt, says "If you had a Category 4 hurricane that hit New Orleans, which we have all tried to prepare for, with a 4-foot storm surge, you'd have 20-feet of water in New Orleans - that's frightening." While there may still be some debate about what is causing global warming, climate watchers have no doubt it's real.



## DSM Report in the Works

South Carolina Energy Office staff are working on analyzing and writing the latest demand-side management report. This will be the eighth annual report on demand-side activities implemented by the suppliers of electricity and natural gas throughout South Carolina, and should be ready for publication by the end of the year. It will summarize energy conservation information submitted by retail distributors of electricity and natural gas in South Carolina, with a purpose of describing ways to use conservation to meet the needs of South Carolina. The 1999 report will include information from all 46 electric utilities operating in the state, and 16 natural gas suppliers operating in the state. The publication of this report is required by the South Carolina Energy Conservation and Efficiency Act of 1992. Past years' reports can be found on our website at <http://www.state.sc.us/energy/publicinforequest.htm>.

[The Energy Connection](#)

## What's Happening Around the State



Welcome to our newest Rebuild South Carolina Partner, the Town of Westminster. Energy audits, which will identify feasible energy measures, are now underway at City Hall, the Police Station, and at a former school building in Westminster.



Greenville County is another recent Rebuild South Carolina partner. The first county facility undergoing an energy audit is County Square. County Square is a 280,000+ square foot facility that serves as the county's main administrative and service center.

A major opportunity for energy-efficiency improvement is the lighting system at County Square. There are in excess of 3,900 fluorescent fixtures in the building that need to be retrofitted with energy-efficient lamps and electronic ballasts. Savings from such a retrofit will yield significant savings. Other measures being analyzed include building controls and the HVAC system.



Rebuild South Carolina energy audits were recently completed for Norris-Wingo Hall and Ashby-Jones Hall on the campus of Charleston Southern University. Energy-efficiency measures recommended were for the conversion of the existing lighting system to energy-efficient lamps and electronic ballasts.



Clarendon School District 2 and Marion School District 2 have recently completed lighting projects under the Schools Initiative Lighting Grant Program. The South Carolina Energy Office estimates that these retrofits will save Clarendon School District 2 \$3,300, and Marion School District nearly \$13,500 in energy costs annually.

## How Can I Save Energy in My Home?

The South Carolina Energy has developed a set of 14 Energy Briefs for the residential sector, to assist those interested in saving energy and money through energy efficiency. The Briefs, complete with plenty of instructional and informative diagrams, graphics and South Carolina-specific information, run the gamut from insulation and landscaping to solar and geothermal technologies.

These publications are available online on our web site ([www.state.sc.us/energy](http://www.state.sc.us/energy)) under Public Information, and in print form by request. The titles of the Briefs are as follows:

“A Guide to Making Energy-Smart Purchases”  
“Automatic and Programmable Thermostats”  
“Cooling Your Home Naturally”  
“Energy-Efficient Air Conditioning”  
“Energy-Efficient Lighting”  
“Energy-Efficient Water Heating”  
“Energy-Efficient Windows”

“Geothermal Heat Pumps”  
“Landscaping for Energy Efficiency”  
“Loose-Fill Insulations”  
“Residential Solar Heating Collectors”  
“Saving Energy with Electric Resistance Heating”  
“Selecting a New Water Heater”  
“Solar Water Heating”

An extensive source list at the end of each Brief provides contact information for organizations relating to that specific topic.

These publications will be helpful to anyone interested in making their home more energy efficient. For more information or a copy of any Energy Brief contact Reneé Daggerhart at (803) 737-8035 or [rdaggerhart@drd.state.sc.us](mailto:rdaggerhart@drd.state.sc.us).

## Facilities Managers Conference Highlights

The Association of South Carolina Energy Managers (ASCEM) and the South Carolina Association of Physical Plant Administrators (SCAPPA) held their fourth-annual joint meeting November 11-14, 2000, in Myrtle Beach. The theme of the 2000 South Carolina Facilities Managers Conference, New Ideas for a New Century, encouraged over 200 attendees and vendors to consider innovative and effective facility management techniques.

ASCEM organized educational sessions about heat pipe technologies, saving energy with automated indoor lighting controls, power factor correction, the status of utility markets, and the International Building Codes adopted by SC in July 2000. Motivational presentations sponsored by ASCEM included “Stressed/Desserts” by Alyce DeWitt and “Getting a Grip on Life, Not Someone Else’s Neck” by Jim Littlejohn.

Project of the Year awards were given at the conference banquet. Jeff Hinson, Utility Director for Clemson University, received the Energy Manager of the Year award for his commitment to reducing energy costs and consumption for the school. The new Beaufort High School was recognized as the Energy Project of the Year. Beaufort Engineering Services designed an HVAC system that will keep energy use low while maintaining good indoor air quality, an important consideration in the humid low-country region.

The ASCEM business meeting resulted in the election of new officers and discussion of a possible Certified Energy Manager program. Kent Orr of USC-Spartanburg will be serving ASCEM as Chairman, Fletcher Riley of the Adjutant General’s Office as Vice-Chairman, Mark Martin of the Adjutant General’s Office as Treasurer, Carmen

Harper of the S.C. Energy Office as Secretary, and Paul Hadley from the Department of Natural Resources, Dave Tomayko from the College of Charleston, and Ernst Neumeister from Orangeburg School District 4 as the Board Members-at-Large.

For more information on ASCEM, contact Kent Orr at (864) 503-5539 or [korrr@uscs.edu](mailto:korrr@uscs.edu), or visit <http://www.state.sc.us/energy/ascem>.



*Accepting an award for Outstanding Support of ASCEM are Phil Wilson, Ed Reamer, and Glenn Rutter of Control Management, Inc. Control Management has supported and been a part of ASCEM since its inception in 1989.*



## SCEO Staffer Takes On New Responsibilities

Carmen Harper of the Funding and Evaluation team has been promoted to Planner for the S.C. Energy Office. She will provide planning, writing, and program development services in support of the State Energy Program and develop and maintain the South Carolina Energy Office home page. Carmen will also monitor energy-related legislation and maintain and publish a record on the status of such legislation. She will prepare and publish the State Energy Plan, which includes South Carolina Energy Office project descriptions and milestones that are submitted annually to the US Department of Energy. This report includes long term qualitative and quantitative energy goals for the residential, commercial, industrial, and transportation sectors. Carmen will maintain State Energy Plan milestones and monitor milestone progress, prepare the State Energy Action Plan, assist in developing sustainable development projects in South Carolina, and assist in the preparation of the annual Demand-Side Management Report.

## Coming Soon

The manual *Landscape Design for Energy Efficiency*, developed by Clemson University for the SC Energy Office and the SC Forestry Commission, will be available free of charge beginning January 2001. Amateur landscapers will find useful information on how landscape design can help reduce energy consumption in the home through proper plant placement. The manual will be available by request and on our website.



## "Green Power" Comes To SC

Decaying matter in the Horry County landfill will soon become a source of power for Santee Cooper, under a plan announced by the state-owned electric company and the Horry County Solid Waste Authority.

Under the proposal, Santee Cooper will burn the gas that builds up in the landfill on SC Highway 90 as refuse decomposes. Otherwise, the methane would simply be burned off to prevent explosions or fires at the landfill.

The \$3 million project is the first of its kind in South Carolina. The project could be in place by late 2001, according to Bill McCall, Santee Cooper's chief operating officer.

The power plant's three 20-cylinder engines will generate 2.2 megawatts of electricity per hour. That's enough to power about 400 homes, but still a tiny fraction of the 4,000 megawatts Santee Cooper's system of 12 power plants produces normally, McCall said.



The electricity will be marketed as "green power" and sold directly to Santee Cooper customers or to Horry Electric Cooperative, McCall said.

The landfill-generated power will be more expensive than conventional, coal-generated power. "There are a lot of people out there who are interested in saving the environment, and this is a way to do it if they're willing to pay more," McCall said.

Anderson County officials have also asked Santee Cooper to tap their landfill for methane.

Landfill gas is about 50 percent methane. It also contains hydrogen sulfide, carbon dioxide and other contaminants that can corrode energy-generating systems.

Landfills have become attractive alternatives to coal-fired power plants because the methane they produce is a renewable resource. As long as organic material is buried in landfills, the bacteria that break it down will produce methane. Methane from landfills is cited as one problem contributing to global warming, the rise in the earth's temperature caused by human activities. Carbon dioxide is most commonly cited as a cause of warming. But methane, while produced in smaller quantities, is about 21 times more effective at contributing to global warming, according to recent research by the NASA. Burning methane produces carbon dioxide, nitrogen wastes and water.

"Anytime you use an alternative fuel to replace coal burning, it's worth it," said Caitlin Winans of the S.C. Coastal Conservation League. "As you replace these dirty methods – even if it's a drop in the bucket – those drops add up."

This article by Kevin Wiatrowski was reprinted with permission from the Myrtle Beach Sun News.

## Special Projects Announcement

Each year, the US Department of Energy (DOE) offers the State Energy Offices the opportunity to compete for funding for a variety of special projects that implement specific energy efficiency initiatives. The SCEO is seeking partner organizations to develop project proposals that meet DOE criteria and that will advance energy efficiency in South Carolina. The SCEO must submit its special project applications to DOE by February 23, 2001. DOE will select projects for funding in April or May and award grants no later than September 30, 2001.

Project areas include Clean Cities and Alternative Fuels, Industrial Technologies, Building Technologies, the Federal Energy Management Program, and Power Technologies; these are broken down into several sub-areas for funding. The complete details are available in the Special Projects Solicitation that can be viewed and downloaded at <http://www.state.sc.us/energy/fundingopportunities.htm>.

SCEO will concentrate on developing project proposals that support the 2000-2001 State Energy Action Plan. A major emphasis will be transportation projects in the two regions seeking Clean Cities designation: Central Midlands and Catawba-Charlotte. In the Industrial Technologies area, projects must target industries within the nine major industrial groups designated as Industries of the Future by DOE.

The Building Technologies area offers several funding options. SCEO priorities are: 1) projects that will support efforts to improve the energy efficiency of existing public facilities, especially educational facilities; 2) projects that will increase adoption of advanced building design and construction practices; and 3) projects that link energy efficiency technologies with environmental improvement.

In the Power Technologies area, SCEO will emphasize Biomass Power Projects. Proposals are sought for the recovery and use of biogas from municipal solid waste landfills, animal manure in farm digesters, or wastewater treatment plants.

Ideas for project proposals should be submitted to SCEO in the form of a one-to two-page project description with an estimate of total project costs, the amount to be requested from DOE, and the sources of cost share funds. These pre-proposals must be addressed to Carmen Harper for receipt no later than Monday, January 8<sup>th</sup>. Since project proposals will be developed in partnership with SCEO, interested parties are urged to discuss their ideas with staff. Contacts for the various program areas are:

<u>Program Area - SCEnergy Office</u>	<u>Contact</u>	<u>Phone Number</u>
Clean Cities / Alternative Fuels	Patricia Tangney	(803) 737-8036
Industrial Technologies	Tom Hudkins	(803) 737-8285
Building Codes and Standards	Sonny DuBose	(803) 737-9852
Rebuild America	Rick Baldauf	(803) 737-9854
Building America	Sonny DuBose	(803) 737-9852
Energy and Environment	Carmen Harper	(803) 737-7177
Federal Energy Management	Tom Hudkins	(803) 737-8285
Power Technologies	J.P. Gouffray	(803) 737-8038

### Local Government Planning Guide Released

The SC Energy Office, in cooperation with the Office of Regional Development, is releasing a new handbook for local government land use planners called *Preparing the Energy Element for Local Comprehensive Plans*. A training workshop for users is planned for February 2, 2000 at the quarterly meeting of the SC Chapter of the American Planning Association in Columbia. For further information call Kate Billing of the SC Energy Office at (803) 737-8034.

## **United Kingdom Introduces “Energy Labeling” For All New Homes**

Energy labeling for new homes is being introduced by the British government to provide prospective buyers with information on the energy efficiency of new dwellings.

Under new provisions, house builders will be required to visually display energy ratings of new homes as well as notify the building control body.

Construction Minister Nick Raynsford said the government was committed to reducing carbon dioxide emissions, and any means by which this could be promoted would be encouraged.

“The new requirement means that house builders will have to display an energy rating notice in all new homes. This will give prospective buyers and first occupiers an idea of how energy efficient the home is and help to promote energy efficiency as a factor in people’s decisions on which home to choose.”

The new energy labeling requirement will come into force on January 1, 2001. As previously, the energy ratings will be calculated using the Standard Assessment Procedure for Energy Rating of Dwellings (SAP). The SAP rating is based on space and water heating costs and is expressed on a scale of 1 to 100 - the higher the number the more energy efficient the home.

A separate revision to the Approved Inspectors Regulations will require private sector approved building inspectors to work more closely with fire authorities at the design and construction stages of

## **AFVs on the Move**

In order to highlight the availability of AFVs and alternative fuels in the Rock Hill/Charlotte area, the Catawba/Centralina Clean Fuels Coalition (CCCFC) hosted an “Advancing the Choice” event on September 28. Approximately 80 people attended the event, which was marketed to local, state, and federal fleet managers and the general public. This day-long workshop included presentations from auto manufacturers on their new product lines, an update on fuel availability from fuel suppliers in the region, a policy discussion on DOE’s potential rulemaking on the inclusion of private and local fleets into the Energy Policy Act, and a ride and drive session. The CCCFC received a great deal of support from the OEM (original equipment manufacturer) auto manufacturers – Ford, GM, Daimler-Chrysler, Honda and Toyota all set up exhibits, and most brought their new vehicles to the ride and drive.

The event received a great deal of positive attention from local press, such as the *York Observer*, the *Rock Hill Herald*; cable station CN2; network station WSNC Channel 9; and radio station WRHM. Workshop attendees were especially pleased by the opportunity to drive vehicles like the Toyota Prius, the GEM neighborhood low-speed EVs, the Ford Ranger S10 EV, and several propane models. Southern Gas generously donated the fuel for the propane vehicles.

Because of high turnout and interest among the fleet managers, many organizations decided to become stakeholders in the CCCFC. These include Ford Motor Co., Suburban Propane, Harrelson Toyota, Rick Hendrick Honda, Burns Automotive Group, McKinney Chevrolet, and Southern Gas, to name a few. The CCCFC looks forward to working with these organizations to bring an AFV infrastructure to the Charlotte/Rock Hill area.

If you are interested becoming a stakeholder in the CCCFC, please contact Wendy Bell at (803) 327-9041.

## **In Other AFV News...**

A lack of incentives for alternative fuels is an often-cited reason for the dearth of AFVs and refueling infrastructure in South Carolina. The Central Midlands Clean Cities Coalition (CMCCC) is trying to change all that by developing legislation that would provide incentives for alternative fuel use and infrastructure development.

The CMCCC began working with the Catawba/Centralina Clean Fuels Coalition CCCFC and local stakeholders this fall to draft legislation that will benefit a developing AFV market in the state. The legislation will ultimately include tax incentives for vehicle purchases, incentives for capital investment in refueling stations, and possibly a reduction in the road use tax for alternative fuels.

Stakeholders including SC DHEC, State Fleet Management, the SC Energy Office, the City of Rock Hill, United Energy, and both coalitions met in early December to study draft legislation and make recommendations for the final version. The CMCCC expects to wrap everything up by December and introduce the legislation this spring. If you are interested in participating in the CMCCC, please contact Ashley Jacobs at (803) 376-5390.

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## South Carolina Celebrates America Recycles Day

Pete Craig of Gloverville will think of the importance of recycling every time he enjoys a soft drink. Pete won the grand prize of \$1,000, courtesy of the South Carolina Soft Drink Association, in the South Carolina America Recycles Day (ARD) drawing.

Pete was one of approximately 32,400 South Carolinians who signed a challenge card, accepting the challenge to recycle and buy products with recycled content, in the third-annual America Recycles Day campaign. By signing the challenge card, participants became eligible for the cash drawing as well as other great prizes.

Toni Gallop of Wagener won \$100 worth of recycled-content products from The Home Depot, while Betsey Deitchman of Simpsonville won 4 tickets to an Atlanta Braves game. Other prizes included a jacket, bike and wagon made from recycled content materials, as well as a two-night stay at the Cypress Inn, a "green" bed and breakfast inn.

The Rick Garvais family of Greenville was named the Recycling Family of the Year, winning a \$1,000 savings bond. Lemira Elementary School of Sumter was named Recycling School of the Year in a contest sponsored by the S.C. Soft Drink Association. The school received 25,000 sheets of recycled-content paper, and an outdoors recycled plastic bench, courtesy of the US Environmental Protection Agency.

The challenge cards completed by South Carolinians have been sent on to the national level for a drawing on December 15 in Washington, DC. The national grand prize is the

"American Green Dream House," a 1,859 square foot house constructed of mostly recycled-content materials, as well as \$35,000 for the purchase of land. An under 18 winner will also be drawn; he/she will be awarded a four-day trip for four to Walt Disney World.

ARD in South Carolina is organized by a statewide steering committee of local governments, state agencies, private industries, trade associations, and non-profit groups. Members include: Clemson Extension; Fisher Communications; Fort Jackson; Greenville County; Keep America Beautiful of South Carolina; National Kidney Foundation of South Carolina; Recycling Market Development Advisory Council; SC Conservation District Employees Association; SC Department of Education; SC Energy Office; SC Soft Drink Association; SC Press Association; US Postal Service (Greater South Carolina Cluster); and York County. The SC Department of Health and Environmental Control's Office of Solid Waste Reduction and Recycling is the state coordinating agency.

Three Midlands area elementary schools were the guests at the first annual ARD Recycling Adventure 2000 at Fort Jackson in Columbia. This was the first time that South Carolina ARD

committee members joined together to produce one ARD event. Over 200 fourth through sixth grade students attended the Adventure, where they rotated through booths offering such activities as making newspaper hats, friendship rings from polystyrene pellets, bowling with two liter bottles, and completing an ARD challenge card.

Also participating in America Recycles Day was the Savannah River Site in Aiken, SC. Exhibitors from both on-and off-site organizations provided employees with information on recycling, buying recycled products, and energy conservation.

The theme for this year's America Recycles Day was "For the Future...Buy Recycled Today." It underscored the importance of purchasing recycled-content products and packaging, and the contributions that recycling makes on the environmental well-being of future generations. Thousands of recycled-content products are available and, by purchasing them, the nation's consumers are building markets for finished products made from the items they place in those recycle bins.



*E2 of the SC Energy Office gives Herb Hurst of the Technical Services Division of Westinghouse, SRS, some information on how to save energy in his home.*

### ***Radioactive Waste Disposal...***

provides research support to the manager and works with Barnwell County to ensure smooth expenditure of funds from the Barnwell County Economic Development Fund. D’Juana Wilson, a former employee of DHEC’s Office of Ocean and Coastal Resource Management, provides administrative support for both the Radioactive Waste Disposal Program and the Atlantic Compact Commission.

The Energy Office is pleased to take on these new responsibilities in assuring the smooth implementation of all facets of the Atlantic Interstate Low-Level Radioactive Waste Compact Implementation Act.

### ***Energy Labeling...***

building projects to ensure that the design of the finished building is compatible with subsequent controls under fire precautions legislation.

Addressing this further revision, the Minister said that it was important that people carrying out building work were not faced with conflicting demands from different regulatory bodies.

"Consultation between building control bodies and fire authorities at the design and construction stage helps ensure that building owners do not have to make further alterations after the building control body has signed off the work, in order to satisfy fire authority requirements."

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